April 22, 2011

Via Electronic Mail

Ms. Carole H. Beswick and Members of the Board
Santa Ana Regional Water Quality Control Board
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Re: Updated Orange County Model Water Quality Management Plan (WQMP) and Technical Guidance Document (TGD) under Order No. R8-2009-0030

Dear Chair Beswick and Members of the Board,

The Natural Resources Defense Council ("NRDC"), on behalf of its over 100,000 members and online activists in California, including members in the Orange County area affected by the Orange County MS4 Permit, Order No. R8-2009-0030 ("Permit"), appreciates the opportunity to submit comments on the Draft Water Quality Management Plan ("WQMP") and its accompanying Technical Guidance Document ("TGD"). One and one-half years after the adoption of the Permit, the Permittees have resubmitted a model WQMP and TGD that still fail to meet the requirements of federal and state law or properly implement critical Permit terms. We urge the Regional Board not to approve the WQMP and TGD, and to hold the Permittees accountable for their continued delay in implementing provisions necessary to protect Orange County's aquatic resources.[1]

Background

In adopting R8-2009-0030, the MS4 Permit for North Orange County, the Regional Board provided the Permittees with clear deadlines and compliance guidelines for implementing the Permit. Over the course of the following year, NRDC participated as a member of Orange

[1] We are aware that the Regional Board has forwarded an Errata Sheet to interested stakeholders as of 1:36 PM, April 21, 2011, less than 18 hours before the Board hearing on the revised WQMP and TGD. We note that the time afforded to review this sheet or the numerous, apparently substantive, changes to WQMP and TGD language is entirely insufficient, and we do not incorporate comments on the proposed changes here. We further note that, as a result of delay on the part of the Orange County Permittees in submitting the WQMP and TGD, the hearing on these documents will occur before the close of the 30-day public comment period. The apparent rush to review, and potentially take action to approve these documents under the current circumstances is unwarranted.

County's Technical Advisory Group ("TAG"), but found the County and Co-Permittees unwilling to adequately consider comments of NRDC and other environmental group stakeholders (including Orange County Coastkeeper ("Coastkeeper")) in revising successive iterations of the Draft WQMP and Technical Guidance.[2] The end result of the TAG process in 2010 was a woefully inadequate WQMP and TGD that neither NRDC nor Coastkeeper supported, and that, while submitted to the Regional Board "on time," engendered hundreds of suggested revisions by Board staff. On October 29, 2010, the Regional Board, over the objections of NRDC and Coastkeeper, granted the Permittees a six-month extension to submit a revised WQMP and TGD. Now six months later, the Permittees have submitted revised documents that once again fail to address concerns raised by NRDC and Coastkeeper, fail to adequately respond to suggested revisions made by Regional Board staff, and which prompted the U.S. EPA to state that it "continue[s] to have significant reservations with many aspects of how the updated WQMP and TGD propose implementing the [Regional Board's] Orange County MS4 Permit."[3]

We discuss several of our numerous concerns with the WQMP and TGD, including concerns that we have repeatedly raised with the County and TAG, in the sections below.

<u>The WQMP and TGD's Threshold Benefit Criterion and Economic/Cost-Benefit Analysis Are Deeply Flawed and Should be Removed From the Submitted Documents</u>

NRDC has consistently supported use of LID practices that retain water onsite, such as infiltration, evapotranspiration, and harvest and re-use.[4] LID practices that retain runoff onsite represent the most effective means of addressing the water quality and quantity problems associated with urban runoff, and we believe these techniques are required by the Clean Water Act's maximum extent practicable ("MEP") standard for pollution reduction[5] because of their practicability, low cost, and superior performance relative to conventional best management practices ("BMPs"). As one state hearing board has held:

> [MEP] means to the fullest degree *technologically* feasible for the protection of water quality, except where costs are wholly disproportionate to the potential benefits . . . . The term 'maximum extent practicable' in the stormwater context implies that the mitigation measures in a stormwater permit must be more than simply adopting standard practices.

[2] Attached to this Letter are examples of comments submitted to the Orange County TAG by NRDC and Coastkeeper in 2010 and 2011.

[3] Letter from David Smith, U.S. Environmental Protection Agency, Region IX, to Mark Smythe, Santa Ana Regional Water Quality Control Board (April 15, 2011), at 1.

[4] See, NRDC Letter to Santa Ana Regional Water Quality Control Board (April, 2009).

[5] See 33 U.S.C. § 1342(p)(3)(B)(iii).

(*North Carolina Wildlife Fed. Central Piedmont Group of the NC Sierra Club v. N.C. Division of Water Quality*, 2006 WL 3890348 at ¶¶ 17-18 (N.C.O.A.H. October 13, 2006).) Thus, under both the Permit and MEP standard generally, the Permittees, and new and redevelopment projects within Orange County, are required to use practices that retain stormwater onsite where feasible.

In spite of the practicability of LID practices that retain runoff onsite, the TAG presentation by Orange County on April 26, 2010, stated that "if incremental benefit of retention is less than half of target, then [the project is] not required to provide retention before moving to biotreatment."[6] NRDC and Coastkeeper commented at that time that there was categorically no justification for this cutoff to be used in determining whether onsite retention is to be required at a given project:

> Both permits fully contemplate that any amount of runoff up to the design storm sizing criteria that can be feasibly retained onsite, regardless of volume, is to be retained onsite. (See Permit, at XII.C.2, fn. 56 (bio-treatment "may be considered only if infiltration, harvesting and reuse and evapotranspiration *cannot be feasibly implemented* at a project site.").)[7]

Appendix XIII of the TGD, which purports to validate the establishment of an incremental threshold benefit criterion for use of LID retention practices, retains a similar, unjustified approach to determining feasibility for use of onsite retention. The TGD states that if a "BMP would achieve less than 40 percent capture of average annual runoff, then it is not mandatory to use the given BMP in order to demonstrate that the system has been designed to achieve the maximum feasible retention of the [design capture volume]." (TGD, at App. XIII.1.) The asserted basis for this criterion is unsupported in the record, notably one-sided in its presentation of the costs and pollution control benefits of retention practices vs. biofiltration, and in any case, violates the clear command of the Permit and the requirements of the Clean Water Act's MEP standard. It should be deleted from the TGD.

The TGD states that this provision "Generally . . . will only apply to harvest and use systems where demand is extremely limited to manage the [design capture volume]." The TGD fails to even attempt to provide justification for such a provision to apply to other means of retention required under the permit, such as infiltration or evapotranspiration practices. Yet, under the TGD's language use of a rain garden, infiltration swale, or other retention practice would be entirely exempt from Permit requirements to retain runoff onsite if the technique, as a standalone, individual practice, provided retention of less than 40 percent of the average annual volume of runoff. The TGD states that this:

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[6] Orange County TAG for NPDES New Development/Significant Redevelopment Program, April 26, 2010 presentation, at p. 29.

[7] NRDC and Coastkeeper Letter to Mr. Richard Boon, OC Watersheds, May 4, 2010.

> numeric threshold should reflect conditions where the *cost of BMP implementation greatly outweighs the pollution control benefits* and where the *'alternative scenario'* allowed by the criterion provides similar effectiveness and much lower cost. For both infiltration BMPs and harvest and use BMPs, this can be referenced to the volume reduction and treatment performance that would be achieved by biotreatment BMPs designed for the maximum feasible partial retention.

(TGD, at App. XIII.3.) Effectively, and without basis, the TGD claims that where a practice will not result in retention of at least 40 percent of the average annual runoff volume, then use of biotreatment will by definition result in the same pollution control benefit at "much lower cost." This assertion is entirely unsupported either by the TGD or in the record of the Permit adoption process before the Regional Board, and reflects nothing more than a consistent and oft-stated preference of the Permittees for use of biotreatment in place of retention practices. The Permittees' preference, however fervent, does not reflect the requirements of the Orange County MS4 permit or the requirements of the MEP standard.

NRDC has commented repeatedly to the TAG its concern that the TAG was evincing an "overemphasis . . . on the influence and scope of economic considerations in the development of 'infeasibility' criteria," for the WQMP and TGD and that the Orange County MS4 Permit makes clear that the onsite retention of the 85th percentile storm is presumed to be feasible for any given development.[8] We remind the Regional Board that the cost-effectiveness of LID and practices that retain runoff onsite was well-demonstrated in studies and technical and economic analysis in the record of the Permit's adoption.[9] To the extent that the Permittees are attempting to challenge the economic feasibility of infiltration or evapotranspiration practices that retain runoff onsite here, Appendix XIII provides no evidence whatsoever to substantiate any claim that biotreatment practices are more cost-effective than retention practices. As the U.S. EPA points out, "In fact, infiltration methods such as rain gardens will be more cost effective than the construction of underdrains included in biotreatment systems."[10]

With respect to capture and use systems, the TGD's claimed analysis of the costs of implementation is both notably deficient and highly biased. The TGD claims to consider the "other environmental and societal effects associated with such a system," such as "Energy and resources used to manufacture of [sic] plastic, metal, or concrete tanks," the "Energy and

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[8] See, e.g., NRDC and Coastkeeper Letter to Mr. Richard Boon, OC Watersheds, May 4, 2010.

[9] See, e.g., U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*; ECONorthwest (November 2007) *The Economics of Low-Impact Development: A Literature Review.*

[10] Letter from David Smith, U.S. Environmental Protection Agency, Region IX, to Mark Smythe, Santa Ana Regional Water Quality Control Board (April 15, 2011), at 6.

resources used [in] manufacture of pumps, treatment systems, and piping," and "Energy and air quality impacts associated with shipping and installing the system" or "with transportation for specialized maintenance activities." (TGD, at App. XIII.2.) Not only does the TGD fail to provide any actual accounting or reference to supporting documents to substantiate these purported costs, but it fails to consider that the cost of any of the above materials, products or services may be implicated by installation of biotreatment systems (the "alternative scenario"), which require the manufacture, shipping, installation, and maintenance of french drains, piping, and associated plastic, metal, and concrete components. The analysis further omits mention of benefits provided by onsite retention of stormwater through capture and use, such as reduced stormwater pollution, reduced strain on municipal stormwater systems, and reduced strain on potable water supply systems.[11]

In all, Appendix XIII of the TGD represents a flawed, unsupported attempt to circumvent Permit requirements to retain runoff onsite using practices that infiltrate, evapotranspire, or capture and use, unless it is technically infeasible to do so. Appendix XIII and any reference to use of a threshold benefit criterion should be deleted from the TGD and WQMP.

Treatment Control BMPs Are Required For Any Portion of the Design Capture Volume Not Retained Onsite

The State Water Board, through Water Quality Order 2000-11 (the *Bellflower* decision), has established SUSMP hydraulic sizing criteria as a compliance floor for all Regulated Projects in the state.[12] The Permit references this requirement in finding 63 (Permit, at p. 21), and further requires that "At a minimum, structural BMPs shall be designed and built in accordance with the approved model WQMP and must be sized to comply with one of the following numeric sizing criteria . . . Volume–based BMPs shall be designed to infiltrate, filter, or treat either: 1) The

[11] U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*; ECONorthwest (November 2007) *The Economics of Low-Impact Development: A Literature Review*. We also note that the TGD fails to provide support for the claim that biofiltration will provide "similar effectiveness" for pollution control to retention practices. The recently released Draft Ventura County Technical Guidance Manual estimates pollutant removal efficiencies of biotreatment for total suspended solids at 54-89 percent, and total zinc at only 48-96 percent, well below the 100 percent that would be achieved by onsite retention. The figures for biotreatment are worse for phosphorous and total nitrogen, with removal efficiency for total nitrogen estimated at between only 21-54 percent. (Draft Ventura County Low Impact Development Technical Guidance Manual, November 4, 2010, at D-7, available at http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/index.shtml.)

[12] State Water Resources Control Board (2000) Water Quality Order No. 2000-11, at 15-18.

volume of runoff produced from a 24-hour, 85th percentile storm event . . . ." (Permit § XII.B.4.)

The WQMP, as currently drafted, fails to properly implement this requirement. In various places, the WQMP: would improperly allow for water quality credits to reduce volume-based treatment control requirements (WQMP § 7.II-3.1.1); allow for waiver of treatment control BMPs based on economic considerations (WQMP § 7.II-3.3.2); and would allow for performance of alternative compliance in place of treatment control BMPs (WQMP § 7.II-3.4.1). Neither the Permit, nor WQ Order No. 2000-11 allow for such reductions in use of treatment control BMPs, and the WQMP must be revised accordingly.

Sub-Regional or Regional Projects May be Used to Meet the Permit's LID Requirements Only Where it is Infeasible to Meet Onsite Retention Requirements

The Orange County Permit requires that "infiltration, harvesting and re-use, and/or evapotranspiration . . . of the design capture volume [occur] at the project site as close to the source as possible." (Permit, at ¶ XII.C.7.) Only where it "site conditions do not permit" use of LID at the project site may any project consider implementation of LID (which under the Permit has been defined to include use of biotreatment systems that treat and discharge runoff) on a sub-regional or regional basis.

As stated earlier, NRDC has consistently supported the use of LID practices that retain runoff onsite. In this regard, we note that at least with respect to regional or sub-regional projects that use biotreatment as a means of addressing runoff, or that result in the treatment and discharge of runoff rather than retention, there is no justification for the WQMP's claim that "it may be most appropriate to implement LID BMPs beyond the boundaries of the specific development being proposed." (WQMP § 7.II-2.4.3.2.) Where onsite retention of runoff is feasible, regional or subregional projects that utilize biotreatment, are not permitted as a replacement for onsite retention. Nor, as the WQMP claims, is there basis to allow use of regional or sub-regional projects in place of onsite retention in the event an approved WIHMP Plan or Master Plan states that "use of regional BMPs is preferred." (*Id*.)

While the current WQMP language has been subtly altered from earlier drafts, the cited provision above reflects a persistent, and wholly unfounded argument of the Permittees that section XII.D.5 of the Permit, which sets out provisions concerning the Permit's hydromodification requirements, may be invoked to supplant the Permit's LID retention requirements contained in Permit § XII.C. It does not. By its clear language, Section XII.D.5 concerns specifically and solely hydromodification requirements, and does not under any interpretation exempt projects from the Permit's otherwise applicable LID requirements. NRDC has notified the Permittees on at least three separate occasions of the erroneous nature of this interpretation of the scope of section XII.D.5's.[13] The U.S. EPA has likewise notified the

[13] See, NRDC and Coastkeeper letters to Mr. Richard Boon, OC Watersheds, Jan. 22, 2010; Feb. 25, 2010; and March 1, 2011.

Regional Board that "It would not be appropriate for . . . plans prepared pursuant to section XII.D of the Permit to modify the LID requirements of the Permit contained in section XII.C." The WQMP must be revised such that regional and sub-regional projects are not permitted in place of onsite retention.

The WQMP's Water Quality Credit Program is Overbroad and Unsupported

The Permittees propose to allow a broadly defined swath of projects to be granted waivers from meeting portions, seemingly arbitrarily assigned at between 5 percent and 25 percent, of the Permit's LID retention requirement, up to a cumulative total of 50 percent. Of particular concern, the Draft proposal would exempt nearly *any* form of development from 20 percent of the Permit's LID requirements if it is considered "mixed use," "transit oriented," or a "live-work development," designations that are poorly defined if at all within the WQMP and cover a potentially tremendous area within Orange County. Under the WQMP's reference to a transit oriented development as being "within one half mile of a mass transit center," each transit center would then result in greater than ¾ of a square mile of potential development receiving an automatic, 20 percent reduction in required design capture volume, with no requirement that a project demonstrate that it is infeasible to retain the runoff onsite. Just as problematically, the WQMP would require no demonstration that a site's proximity to a transit center would result in any water quality benefit whatsoever.

This problem pervades the entire water quality credit system—the WQMP would not obligate any of the listed projects to demonstrate that it is technically infeasible to implement the Permit's LID retention requirements—merely falling into one of the specified categories would accord the project a partial waiver from the retention requirements, or even the requirement to use biotreatment where onsite retention is technically infeasible. (WQMP § 7.II-3.1.1.)) The only justification presented for the waivers is a generalized and unsupported claim that the development types "may provide other environmental benefits to communities," (though we question what environmental benefit is assured to accrue simply because a development is located in a historic district or "similar area" such that it warrants a 10 percent reduction in required capture volume), and vague assertions that "for certain types of development projects, LID BMPs may be more difficult to incorporate due to the nature of the development." (WQMP § 7.II-3.1.) Included in this group is "High density development" of greater than 7 units/acre. Thus, typical suburban development on 1/8 acre lots is granted an automatic credit, with absolutely no requirement that the development demonstrate any difficulty for incorporating LID BMPs or any corresponding benefit to water quality.

In the MS4 permitting context there is no reason to establish such blanket waivers of stormwater runoff control requirements simply because a project may, in some situations, represent a preferred pattern of development. If a project can feasibly implement onsite retention practices, it should be required to do so. The WQMP does not present any evidence to demonstrate that any or all projects in these categories are incapable of complying with the Permit's LID-based retention requriements, nor does it present any evidence to demonstrate that any perceived benefits of development in a historic district or in proximity to a transit center will

outweigh the water quality detriments created by additional urban runoff.[14] Simply authorizing blanket credits such as the ones proposed here would fail to properly implement the requirement that development reduce the impacts of stormwater "to the maximum extent practicable," and the WQMP should be revised accordingly.

The TGD's Infiltration Feasibility Criteria Improperly Rely on Use of Regional Maps and Are Overly Restrictive

Appendix VII.2.1 of the TGD discusses use of "Regional Maps" and Available Data" in assessing the feasibility of infiltration. However, determinations of infiltration feasibility require a site specific inquiry. Regional soil maps (in particular, U.S. Department of Agriculture soil survey maps) do not contain detail sufficient to make a determination of whether infiltration may be feasible at the site level. Further, the TGD's finding that a minimum safety factor of 2.0 is necessary for all sites is unsupported and overly restrictive. Moreover, it is internally inconsistent, as other sections of the TGD note that under some circumstances a safety factor of 1.0 may be appropriate. The TGD should be revised to allow for infiltration practices to be used where feasible and appropriate.

Conclusion

For the foregoing reasons, we urge the Regional Board to reject the proposed WQMP and TGD, and to direct the Permittees to make changes to the documents as outlined above. Thank you for your attention to this matter, please do not hesitate to contact us if you have any questions.

Sincerely,

Noah Garrison
Natural Resources Defense Council

[14] As U.S. EPA points out, "Most stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization." (U.S. Environmental Protection Agency (December 2007) Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, at 1.)